

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A printing apparatus, comprising:

a curved member carrying a stamp surface having a plurality of separate curved sides that form a periphery of the curved member, each of said curved sides defining a convex surface that intersects with two other of said curved sides, and each of said curved sides including a pattern, wherein, in use, said curved member is configured to roll over a substrate to transfer said pattern on said substrate such that, as said curved member rolls over said substrate, said pattern of each of said curved sides remains stationary relative to each of said curved sides; and

an illumination system configured to direct light to a region of contact between said stamp surface and said substrate.

2. (Original) The apparatus of Claim 1, wherein said curved member has a triangular cross section with curved sides.

3. (Original) The apparatus of Claim 1, wherein said illumination system is located inside said curved member.

4. (Previously Presented) The apparatus of Claim 1, further comprising thermal elements configured to control temperature of said curved member, to align said stamp surface, and to correct magnification of said stamp surface.

5. (Original) The apparatus of Claim 1, wherein said stamp surface is comprised of glass.

6. (Previously Presented) The apparatus of Claim 1, further comprising a resist mechanism configured to provide a layer of resist on a target portion of said substrate.

7. (Previously Presented) The apparatus of Claim 6, wherein said resist sets when illuminated.

8. (Previously Presented) The apparatus of Claim 1, further comprising alignment markers along said stamp surface configured to align with markers along said substrate.

9. (Withdrawn) A device manufacturing method, comprising:
providing a substrate;
providing a layer of resist on said substrate;
providing a beam of radiation using an illumination system;
providing a curved member with a pattern on a surface thereof;
rolling said curved member over said substrate to transfer said pattern onto said layer of resist on said substrate; and
projecting the beam of radiation onto said layer of resist on said substrate.

10. (Currently Amended) A printing apparatus for nanometric scale imprinting, comprising:

a curved member carrying a stamp surface having a plurality of separate curved sides that form a periphery of the curved member, each of said curved sides defining a convex surface that intersects with two other of said curved sides, and each of said curved sides including a pattern wherein, in use, said curved member is configured to roll over a substrate to transfer said pattern onto said substrate such that, as said curved member rolls over said substrate, said pattern of each of said curved sides remains stationary relative to each of said curved sides;

a resist mechanism configured to provide a layer of resist on said substrate; and
an illumination system configured to direct light onto a region where said stamp surface has contacted said layer of resist on said substrate.

11. (Original) The apparatus of Claim 10, wherein said curved member has a triangular cross section with curved sides.

12. (Original) The apparatus of Claim 10, wherein said illumination system is located inside said curved member.

13. (Previously Presented) The apparatus of Claim 10, further comprising thermal elements configured to control temperature of said curved member.

14. (Original) The apparatus of Claim 10, wherein said stamp surface is comprised of glass.

15. (Previously Presented) The apparatus of Claim 11, further comprising alignment markers along said stamp surface configured to align with markers along said substrate.

16. (Previously Presented) The apparatus of Claim 1, wherein the plurality of separate curved sides have a same curvature.

17. (Previously Presented) The apparatus of Claim 10, wherein the plurality of separate curved sides have a same curvature.

18. (New) The apparatus of Claim 1, wherein the curved member has a shape of a Wankel motor-shaped cylinder.

19. (New) The apparatus of Claim 10, wherein the curved member has a shape of a Wankel motor-shaped cylinder.